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ABSTRACT

The research investigated the nature and frequency of hesitation phenomena in speech as presented within content segments featuring interaction among family members on three modes of television programming: documentary, prime time, and soap opera. A sample of videotape recordings for each program format was content-analyzed by noting repetitions, false starts, filled pauses, and unfilled pauses of at least .5 seconds duration. In addition, each conversational segment was categorized according to style (casual, personal, or intimate), and the placement of all pauses was determined as either grammatical or ungrammatical. Analyses revealed that: (1) hesitation phenomena occur least frequently within the prime time format and, depending on the particular measure, most frequently in either documentary or soap opera segments of conversation; (2) for most measures, hesitations occur most frequently in conversations of intimate style and their incidence in intimate style conversations is, with one exception, greatest in the documentary format with prime time segments consistently in the lowest position; (3) for all pausal phenomena, 34% are ungrammatical in the documentary format, 22% are ungrammatical in the prime time format, and 30% are ungrammatical in the soap opera format. The major conclusion of the research is that conversational realism may be perceived variously by viewers attending to different formats of television programming and that perceived content reality may be affected by formal aspects of speech behavior. (Author)

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Hesitation Phenomena in the Language of Family Conversations Across Three Conversational Styles in Three Formats of Television Programming in the U.S.A.

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Hesitation Phenomena in the Language of Family Conversations
Across Three Conversational Styles in
Three Formats of Television Programming in the U.S.A.

Perhaps the most general characteristic of language in use is that it departs radically from any formal patterns of its underlying rule structure when that rule structure is proposed as an ideal type. We seldom have cases of ideal speakers in the sense that Chomsky used that term (Chomsky, 1965). What we do have, instead, is a situation in which spontaneous speech is often characterized by considerable dysfluencies ranging from ungrammatical constructions to speech fragments to discontinuities in speech production. Spontaneous speech "comes in fits and starts with intermittent periods of non-speech" (Goldman-Eisler, 1968, p. 11), and as members of speech communities, we come to take that as given. At the same time, we come to expect that in certain situations speech will be more dysfluent and in others less so. Joos (1961) addresses this notion of situational norms for dysfluencies quite aptly in his provocative discussion of five different styles of English usage. He proposes a continuum of styles with frozen style as the most rigidly fluent and intimate style as the most dysfluent when referenced to the norm of public understanding.

The characteristic dysfluencies of spontaneous speech pose a particular problem for the artist/writer who attempts to re-create interactions in the image of the socially probable. Re-creations that are verbal but not aural obviously cannot adequately represent spontaneous speech, as there is no satisfactory way to express the temporal elements of speech. Aural presentations of scripted material potentially can express speech as it is used, but they are usually feeble abstractions of the "real"

for several reasons. First, there simply does not exist a sophisticated description of all of the elements that comprise spontaneous speech. Second, were such a description to exist, it would probably not be fully exploited because re-creations of human interaction must be temporally compact, and dysfluencies, whether of a pausal nature or of a verbal nature, extend the temporal boundaries of interaction. Third, there has most likely developed a specific norm, an aesthetic, for re-creations that omits the seedier side of language use; consumers of literature and media fare have come to expect that characters will be somewhat more perfect approximations of the ideals of language.

The present study is addressed to the problem of re-creations of speech in the medium of television. Consumers of television programming obviously can do a number of different things with the medium. Katz (1959), one of the major proponents of the uses and gratifications approach to media, contends that 'people's values, their interests, their associations, their social roles, are pre-potent, and than people selectively 'fashion' what they see and hear to these interests." McQuail (1969) suggests that in an aural-visual media presentation, the individual "takes from the picture what is usable for him or what will function in his life" (p. 72). So we might say that certain television programs fulfill a person's need to be entertained and to escape, others satisfy the need for "factual" information about the world, while still others provide instruction for living. And although it is true that the individual will do what she/he will with any particular program, the industries of mass communication also fashion formats of programming to be compatible with different general needs. We might expect that the re-creations of speech may also vary with different program formats, even within the constraints banning a full disclosure of language in use.

The particular problem under investigation here is the degree to which different formats of television programming in the United States re-create speech in the image

of its natural state. This research is part of a set of ethnographic studies on the portrayal of the family in American television.

The three television formats in question are the Documentary, evening Prime Time, and afternoon Soap Opera. Each of these formats offers a unique package of programming concepts. The documentary is intended to capture aspects of the real world. Prime time programs offer comedic and dramatic stories that are self-contained and consist of the standard elements of fiction -- plot, character development, and resolution. The soap opera is a serial form and offers on-going scenarios of a group of characters whose lives are intricately related to one another. With these general notions in mind, one would expect the documentary, particularly if it is using the cinéma vérité style, to mirror to some degree the speech that we find in naturalistic settings. Prime time programs should be much less filled with speech dysfluencies because of temporal constraints and audience expectations, and the soap opera might be expected to contain more dysfluencies because the episodes are not self-contained units of dramatic action.

It is the nature of the soap opera that prompted the investigation of speech dysfluencies. There has existed for some time a debate regarding the degree to which soap operas offer the viewer a realistic appraisal of life as lived. There are those who contend that soap operas are rife with fantasy (Kinzer, 1973; Ramsdell, 1973). Others see this format as presenting the probable in a reasonable manner (Adler, 1972; Katzman, 1972). This disparity might, however, be partially resolved if content and form are treated separately. It is undoubtedly true that the content of many soap operas is not totally realistic, that people do not continuously find themselves in the perplexing and agonizing situations that are the norm for soap opera characters. But the form of interaction, the manner in which the characters converse with one another, may be a closer approximation to everyday usage than other fictional presentations in the media. The content may symbolize, yet not quite represent, human

problems, but the form of interaction may be less a symbol than a reality. Adler (1972) suggests that the pace for soap operas may be quite true to the pace of our own interactions. Bordewick (1974) sees the soap opera format as one that "flows with expansive slowness" (p. D31).

The research strategy for examining the dysfluencies in speech in the three program formats was designed to apply concepts and procedures previously developed in the literature on hesitation phenomena. Hesitation phenomena comprise a particular set of speech dysfluencies that fall into four categories (Maclay and Osgood, 1959). These four categories are false starts, those instances where a speaker begins an utterance and either fails to complete it or begins it in a new manner; repetitions, those instances of repeated phonemic, word, or phrase elements where the repetition serves no particular semantic function; filled pauses, those instances in which a speaker fills gaps between verbal elements with nonverbal but aural elements, such as "um," "ah," "eh"; and unfilled pauses, those instances where a speaker leaves temporal gaps between verbal and aural elements.

Of centrality to the present investigation is the work of Goldman-Eisler on hesitation phenomena of the pausal variety. She has explored the placement of unfilled hesitation pauses in an attempt to compare and contrast that placement for spontaneous speech and reading (Goldman-Eisler, 1969). Her work contrasts pauses occuring at grammatical junctures in utterances with those occuring at ungrammatical junctures. "Ideally," says Goldman-Eisler (1969), "the act of speaking serves the communication of meaning. This is achieved best if the gaps introduced into the stream of speech are coincident with semantic groupings" (p. 13). She and her colleagues have found, however, that this ideal is closely approximated in the reading of texts, but that in spontaneous speech, only 55% of the pauses occur at grammatical junctures (Henderson, Goldman-Eisler, and Skarbek, 1966).

In order for the work done on the placement of hesitations to be applied to

characteristics of speech on television programs, an extension of the meaning of "text" must be made. The reading of texts and the delivery of material memorized from texts is seen here as similar. If the key contrast is between "spontaneity" and "text," then it is reasonable to assume that pausal phenomena will be structured similarily in the reading of texts and the delivery of memorized texts.

We would expect, then, that pausal junctures in the speech of television characters working from scripted material would conform more to the norms established for the reading of texts than for spontaneous speech. We would expect, certainly, that a documentary program in which persons are filmed in natural interaction, would differ considerably from a prime time program in which a plot must be developed and a resolution accomplished within a specified period of time, with scripting elements faithfully reproduced. The soap opera might, however, be quite unlike prime time programs in this respect, even though the dialogue is scripted. Because the temporal dimension is less constrained and the time provided to memorize scripts very limited, more pausal phenomena could reasonably occur, and if the interactive form is more true to life, the pausal phenomena might be less grammatical then in the slick prime time programs.

In addition to the general characteristics of hesitation phenomena, the relationship between the incidence of hesitation and the specific conversational situation must be considered. Because some situations are more casual and contain more conventionalized interaction than others, it is probable that the profile of hesitation phenomena will vary according to situational expectations. A very general way in which to contrast situational characteristics is through use of the concept of conversational style. Styles of conversation can best be delineated on the basis of the purpose of the interaction. Casual style is used to exchange routine greetings and exchanges of information, to coordinate plans and activities, and to accomplish present situational demands. Personal style is used when the purpose of the conversation is to discuss aspects and characteristics of people, their behaviors, and dispositions.

Intimate style is used when interaction partners explore problems, crises, conflicts, and engage in self-disclosure. Ritualized style is used for co-participation in pre-established interaction routines, such as prayer, meal ceremonies, group recitation, and singing. (See Davis, Johnson, and McNamee, 1978, for a discussion of style.)

Because hesitations in ritualized style are essentially scripted and pre-determined, there is nothing to be gained from investigating their characteristics. But we would expect that as participants move from casual to personal to intimate style, there may be a corresponding increase in hesitation phenomena. Casual style demands little verbal planning, while both personal and intimate styles may be characterized by extensive verbal planning, tentativeness, self-consciousness, and reticence. The degree to which any of these attributes are present may well increase to the degree that the interaction is focused on self rather than others. Thus, of all the style categories, the intimate style should be characterized by the highest incidence of hesitation in speech.

To examine the characteristics of hesitation phenomena in the three formats of television programming, a sample of interactions occuring between family members was collected for each program format. The family was chosen as the primary relationship unit to provide continuity across format and because research on the portrayal of families on television is sparse, yet important, due to the present interest in the family in American society. (See Davis, Johnson, and McNamee, 1978,for a discussion of the American family.)

From verbatim transcriptions of family interactions within each of the three program formats (documentary, prime time, and soap opera), all instances of hesitation phenomena were coded for each conversational segment and the length of unfilled pauses was timed. The conversational segment was defined as a unit of interaction uninterrupted by commercial breaks, announcements, and narrations, and containing a stable number of participants, i.e., the entering or exiting of a new participant constituted

a new conversational segment.

The coded transcripts and the data on temporal features of the segments derived earlier (Davis and Johnson, 1978) was used to test the following three hypotheses:

Hypothesis 1: Hesitation phenomena occur more frequently in familial conversations in documentary and soap opera formats than they do in the prime time dramatic format;

Hypothesis 2: The incidence of hesitation phenomena in familial conversations increases across program format from casual to personal to intimate styles of conversation;

Hypothesis 3: The placement of pausal hesitations in the soap opera format is more ungrammatical than the placement of pausal hesitations in the prime time format.

Methods

Sample

Approximately equal amounts of television content (340 minutes) were selected from (1) the documentary series "Six American Families," (2) the ABC prime time entertainment series "Eight is Enough" and "Family," and (3) from the afternoon soap opera dramas "Ryans Hope" (ABC) and "As the World Turns" (CBS). All programming in the three format samples was broadcast during April, May and June of 1977.

From each format's content, conversational segments which involved only related family members were isolated and defined as the basic unit of analysis for this study. The total number of segments identified for each program format was as follows: Documentary, n=137, Prime time, n=244, and Soap Opera, n=109. A more detailed explanation of the program formats and conversational segment definition can be found in the accompanying study, "Familial Relationships, Topics, and Conversational Styles in Family Interaction on Television in the U.S.A.," (Davis, Johnson, McNamee, 1978).

The number of segments in the documentary format represents an omission of two segments contained within this sub-sample. The deletions were necessary because virtually all utterances in two segments of one documentary presentation were

indistinguishable. The same documentary presentation contained other segments in which some utterances or portions of utterances were indistinguishable, but if most of the segment could be deciphered, the segment was included.

Procedures

Transcriptions. After all family conversations in the three program formats were identified, verbatim transcriptions were made of each segment. The transcription process was completed by four individuals who were all trained in the specific methods for transcription appropriate to the study. The four transcribers verified that their transcription procedures were identical by independently transcribing a number of conversational segments. Comparison of the transcriptions established that all of the transcribers were performing the task in the same manner.

The transcriptions included all verbal elements, all filled pauses, and points of unfilled pauses. Symbols were also used to indicate false starts and semantically nonfunctional repetitions.

After the transcriptions were completed, they were compared to the video tape recording at which time all unfilled pauses that lasted .5 seconds or more were timed and the time for each entered into the transcription.

Hesitation Coding. All coding of hesitation phenomena was done by the first author who is trained in linguistic analysis. Each segment of conversation was hand coded according to a standard set of coding rules and a coding form. The information coded for each conversational segment is outlined below.

FALSE STARTS: Every false start in the transcript was tallied as either retracted or unretracted. Retracted false starts are instances of "self-interrupted utterances" (Maclay and Osgood, 1959); in such instances, the speaker interrupts his/her utterance and restructures or begins again. Unretracted false starts are instances of incomplete utterances, i.e., utterance fragments.

The total number of false starts of both types was recorded for each segment as was the number of false starts of each category per conversational turn.

REPETITIONS: Every repetition that did not contribute semantically or that did not serve as emphasis was tallied for each segment. All such segments, whether phonemic, one word, or multiple words, were noted. The total number of repetitions was recorded for each segment, and the number of repetitions per conversational turn was calculated.

FILLED PAUSES: All aural elements that can be phonetically represented and fill gaps between verbal elements, are the initial elements of an utterance, or interrupt silences within utterances were tallied. The total number of filled pauses for each segment were recorded as was the number of filled pauses per turn. In addition, each filled pause was characterized as occuring at either a grammatical or ungrammatical juncture according to the rules described below under JUNCTURE POINTS.

UNFILLED PAUSES: Each conversational segment was examined for the incidence of unfilled pauses noted in the transcript and the duration of which was at least .5 seconds. Both the total number of unfilled pauses and the total unfilled pause time were noted for each segment. Number of pauses per turn and the mean length of unfilled pauses for each segment were also recorded. In addition, each unfilled pause was characterized as occuring at either a grammatical or ungrammatical juncture.

JUNCTURE POINTS: All instances of filled and unfilled pauses were characterized by defining the juncture point where they occur within the utterance as grammatical or ungrammatical. The rules governing this binary decision procedure are those used by Goldman-Eisler and Henderson (Goldman-Eisler, 1969, p. 13); several adaptations were made to allow use of their system

with filled pauses and to accommodate cases not covered within their system.

Grammatical Junctures

1. "Natural" punctuation points, e.g., the end of a sentence, following a form of address, following low information, initial verbal elements such as "well," "so." For filled pauses, the first element of the utterance.
2. Immediately preceding or following either a co-ordinating or subordinating conjunction.
3. Before relative and interrogative pronouns.
4. Following a question that is indirect or implied.
5. Before all adverbial clauses of time, manner, or place.
6. Before and after complete parenthetical expressions.

Ungrammatical Junctures

1. In the middle or at the end of a phrase.
2. Between repeated phonemes, words, or phrases.
3. Following a false start that disrupts the utterance.
4. In the middle of a verbal compound.

TIME RATIOS: For each conversational segment, the total time of the segment and the total speaking time of the segment were noted. These temporal characteristics were established in an earlier phase of analysis (Davis and Johnson, 1978). The total unfilled pause time for each segment was divided by the total time of the segment to establish the ratio of unfilled pause time to segment time. Unfilled pause time was also divided by the total speaking time of the segment to establish the ratio of unfilled pause time to speaking time.

Style Coding. The style characteristics of each segment were noted by using the information coded in an earlier phase of analysis (Davis, Johnson, and McNamee, 1978). Each conversational segment was noted as containing any or all of the following styles of interaction: Casual, Personal, Intimate, Ritual.

Data Analysis. All coding was accomplished through the use of a numerical, computer readable format. Data analysis was conducted using Statistical Package for the Social Sciences, 2nd edition, and computer facilities at the University of Massachusetts-Amherst.

Results

Hesitation Phenomena and Program Format

It was hypothesized that hesitation phenomena occur more frequently in documentary and soap opera formats than in the prime time format. Data pertinent to this hypothesis include the mean number per segment and the mean number per turn of each type of hesitation phenomena for each program format. Eight one-way analyses of variance were performed to test the hypothesis. The results of those analyses are presented below, with each type of hesitation phenomena considered separately. Means for interpreting the results are found in Table 1.

False Starts. In the category of retracted false starts, the means for segments and for turns significantly differ, F (2, 487) = 20.876, $p < .002$ and F (2, 487) = 16.765, $p < .002$. Main effects were also found for the category of unretracted false starts per segment and per turn, F (2, 487) = 11.870, $p < .002$ and F (2, 487) = 11.930, $p < .002$. The pattern in all cases is for the means to be higher in the documentary and soap opera formats than in the prime time format. For each of the four analyses, the documentary format contains the largest means.

Repetitions. Although the mean number of repetitions per turn is not significantly different when comparing program formats, the mean number of repetitions per segment reveals significant variation among the formats, F (2, 487) = 12.098, $p < .002$. The soap opera format has more instances of repetitions per segment than either of the other formats, and the prime time format, again, emerges in the lowest position.

Filled Pauses. For the mean number of filled pauses per segment, there is a main effect for television format, F (2, 487) = 17.232, $p < .002$. The documentary and prime time formats do not differ substantially, but the conversational segments within the soap opera format evidence a much higher frequency of filled pauses. The number of filled pauses per turn illustrates the same pattern, but the greater instance of filled

pauses in the turns of soap opera characters does not reach the .05 level of statistical significance, F (2, 487) = 2.502, p <.09.

Unfilled Pauses. Analysis of unfilled pauses shows that for conversational segments, the soap opera format is far above either the documentary of prime time formats, F (2, 487) = 27.881, p <.002. Here, however, it is the documentary that contains the smallest mean number of unfilled pauses per segment, but the difference between it and the prime time format is not substantial. There was no main effect for television format when the dependent measure was mean number of unfilled pauses per turn.

Time Ratios. Because these analyses are based on frequency data, there is more to be said about the category of unfilled pauses. Unfilled pauses have a temporal dimension, and for the entire sample there was a broad range of unfilled pause length (.5 seconds to 26.3 seconds). More specifically, the mean length of unfilled pauses per conversational segments with unfilled pauses is varied in the three formats. The range in mean length of unfilled pauses within a segment is .5 to 4.8 seconds in the documentary, .5 to 8.9 seconds in prime time, and .5 to 3.8 seconds in the soap opera. To test whether or not the mean length of unfilled pauses is greater in any of the formats, an analysis of variance was conducted. No significant differences were found. For all conversational segments having unfilled pauses, the mean length of those pauses was 1.67 seconds.

As another indicator of the temporal dimension of unfilled pauses, the ratio of total unfilled pause time to total segment time and total unfilled pause time to the total time taken in speaking turns in the segment was considered. Across all formats, the ratio of pause time to segment time was 1 to 6.7; pause time constituted 15% of the segment time. The ratio of pause time to speaking time was 1 to 5; pause time equalled 20% of the amount of time taken in speaking turns. Analyses of variance indicated no significant difference between the three formats for either of these measures.

Summary. It is clear that the conversational segments in the soap opera format evidence a greater amount of hesitation phenomena than those in the prime time format. Somewhat unexpected is the finding that soap opera surpasses documentaries in some instances for the occurrence of hesitation phenomena.

Hesitation Phenomena and Conversation Style

It was predicted that there is a relationship between hesitation phenomena and style of conversation, such that for all television program formats, the incidence of hesitations increases from segments of casual to personal to intimate style. Because all conversational segments could potentially have different portions which, taken together, illustrate each style type, the sample of segments was reduced by 35.7% in order to investigate the hypothesis. Only those segments which were pure examples of a style category were used. This resulted in new sample characteristics. The total number of segments considered was 315. This number included 107 segments from the documentary format (81 casual, 13 personal, and 13 intimate), 142 segments from the prime time format (60 casual, 46 personal, and 36 intimate), and 66 segments from the soap opera format (25 casual, 13 personal, and 28 intimate).

Each type of hesitation was analyzed according to its mean incidence per conversational segment and its mean incidence per conversational turn within the segments. All analyses of variance were 3 x 3 factoral designs with three levels of television format and three levels of pure style. Results are presented for each hesitation type. Cell means for all dependent measures by television format and by conversational style are presented in Table 2 and 3. Cell means to aid interpretation of significant interactions are presented in Table 4.

False Starts. Analysis of false starts provides overall confirmation for the hypothesis. For retracted false starts, main effects were found for television format and style of conversation when the means for segments were considered, F (2, 306) =

25.070, $p < .002$ and F (2, 306) = 15.831, $p < .002$. Here we find the prime time format containing fewer false starts per segment than the other two formats, and false starts per segment increasing as style changes from casual to personal to intimate. There is, however, a significant interaction between format and style of conversation, F (4, 306) = 9.656, $p < .002$. The interaction is accounted for by these differences between the formats: (1) in prime time, there is little difference between mean number of false starts per segment across styles; (2) while both the documentary and soap opera formats show increases in false starts from casual to personal style, the incidence of false starts per segment increases little from personal to intimate style in the soap opera format, but a great deal in the documentary format.

Analysis of the number of retracted false starts per conversational turn indicated main effects for both television format and style of conversation, F (2, 306) = 10.321, $p < .002$ and F (2, 306) = 3.852, $p < .03$. For formats, the number of retracted false starts per turn is greatest in the documentary and smallest in prime time. Casual and personal styles of conversation are similar in the frequency of retracted false starts per turn, but intimate style contains more retracted false starts per turn.

Incidence of unretracted false starts is related to television format and conversational style in a complex manner. The mean number of unretracted false starts per segment differs significantly by television format and style, F (2, 306) = 19.190, $p < .002$ and F (2, 306) = 15.948, $p < .002$. Prime time program segments contain fewer unretracted false starts than do segments from the other two formats, and there is a steady increase of unretracted false starts per segment as style changes from casual to personal to intimate. Television format and style significantly interact, F (4, 306) = 6.754, $p < .002$, and the picture here is one in which instances of unretracted false starts increase much more dramatically across styles for the documentary format than they do for the other formats.

The incidence of unretracted false starts per conversational turn shows a similar

pattern of significant effects for format and style, F (2, 306) = 10.019, p <.002 and F (2, 306) = 8.991, p <.002. The documentary contains the most unretracted false starts per turn, and prime time the least. Again, the dependent measure increases in the predicted manner as style changes. A significant interaction between format and style indicates that for both personal and intimate styles, the mean number of unretracted false starts per turn is of greater magnitude for documentary program segments than prime time or soap opera program segments, F (4, 306) = 2.895, p <.03.

Repetitions. Hesitations of the repetition type are represented differently in program segments depending both on television format and conversational style, F (2, 306) = 15.951, p <.002 and F (2, 306) = 16.953, p <.002. Soap operas have the most repetitions per segment, while prime time programs have the least. Instances of repetitions per segment increase across styles in accord with the hypothesis. Television format and style do, however, interact, F (4, 306) = 4.472, p <.003. All program formats show increases in repetitions when casual and personal styles are compared; but while the documentary and soap opera formats continue to increase substantially in repetitions when personal and intimate styles are compared, the incidence of repetitions per turn decreases in prime time from personal to intimate style.

The mean number of repetitions per turn marked a significant difference for style alone, F (2, 306) = 4.189, p <.02. The number of repetitions per conversational turn is quite similar for casual and personal styles, but substantially greater for segments in which the conversational style is intimate.

Filled Pauses. The picture for filled pauses differs depending on whether the dependent measure is related to segments or turns. For segments, the mean number of filled pauses is significantly affected by both television format and style of conversation, F (2, 306) = 14.760, p <.002 and F (2, 306) = 3.329, p <.04. Segments in the soap opera have the greatest number of filled pauses, documentary is intermediate, and prime time lowest. The mean number of filled pauses per segment increases according

to style as predicted. Television format and style interact such that the mean number of filled pauses per segment actually decreases in the prime time and soap opera formats as style changes from personal to intimate, while the pauses increase dramatically in the documentary format as style changes from personal to intimate, F (4, 306) = 2.659, $p < .04$.

Considering the number of filled pauses per turn, the only main effect is for television format, F (2, 306) = 3.784, $p < .03$. Here the means for the documentary and prime time formats are similar, and the mean for the soap opera format is greater than in the other two formats.

Unfilled Pauses. The degree to which unfilled pauses populate segments and characterize turns is clear. For segments, both television format and conversational style produce main effects, F (2, 306) = 8.719, $p < .002$ and F (2, 306) = 24.386, $p < .002$. Soap opera segments are well above both those in the documentary and prime time formats, and although pauses increase according to style as predicted, the intimate style segments contain by far the most unfilled pauses.

The mean number of unfilled pauses per conversational turn differs significantly according to style of conversation, F (2, 306) = 5.590, $p < .005$. The pauses increase with changes in style as predicted, but again, it is the intimate style that represents the largest difference when all styles are compared.

Time Ratios. Following the procedures used to test Hypothesis 1, temporal features of unfilled pauses are considered in relation to Hypothesis 2.

For the sample created to test the hypothesis, the overall mean length of unfilled pauses per segment is 1.65 seconds. Analysis of variance showed no effects on this mean due to either television format or conversational style.

The ratio of total unfilled pause time per segment to total time per segment is 1 to 6.7. Pauses take up 15% of the segment time, but style of conversation significantly affects this percentage, F (2, 306) = 5.588, $p < .004$. Segments characterized by

intimate style account for the difference. Twenty per cent of segment time is pausal for intimate style. For conversations of casual style, 14% of the segment time is pausal, and for personal style, 13% of the time is pausal.

Comparing unfilled pause time to the total time taken in speaking turns reveals the same pattern. For the entire sample, the ratio of unfilled pause time to time taken in speaking turns is 1 to 5.3; unfilled pause time equals 19% of the speaking time. Again, style produces a significant effect, F (2, 306) = 5.366, p <.004. Twenty-five per cent of the speaking time is taken up by unfilled pauses in the intimate style. Seventeen per cent of the speaking time is pausal for conversations of both casual and personal style.

Summary. The results presented above indicate that conversational style accounts for significant variation in all measures of hesitation phenomena except the number of filled pauses per conversational turn and mean length of unfilled pauses per conversational segment. The variation accounted for by style is in some instances in the direction predicted but in other cases represents a variation of that prediction.

Placement of Pausal Hesitations

It was predicted that pausal hesitations, both filled and unfilled, are more likely to be placed at ungrammatical junctures in the soap opera format than in the prime time format.

In order to test the hypothesis, only segments in the sample that included instances of either filled pauses or unfilled pauses or both types of pause were considered. One hundred and seventy-nine segments met this criterion (documentary = 54, prime time = 60, soap opera = 65).

Analyses of variance were performed to determine if the percentage of pauses occuring at grammatical junctures and the percentage of pauses occuring at ungrammatical junctures varies according to program format. The percentages reflect the combined

total of filled and unfilled pauses for all segments.

Results of the analyses supported the hypothesis. The percentage of unfilled pauses at grammatical junctures varies as a function of television format, F (2, 176) = 6.023, p <.004. The percentage of unfilled pauses at ungrammatical junctures also varies as a function of television format, F (2, 176) = 6.658, p <.003. Pauses at grammatical junctures equal 66% of all pauses in the documentary, 78% of all pauses in prime time, and 70% of all pauses in the soap opera. Pauses at ungrammatical junctures equal 34% for all pauses in the documentary, 22% of all pauses in prime time, and 30% of all pauses in the soap opera.

The hypothesis is supported in that the percentage of pauses at ungrammatical junctures is greater in the soap opera format than in the prime time format.

Discussion

The study was conducted in order to determine if hesitation phenomena in speech are important variables in the aural-visual medium of television. Using portrayals of the American family in interaction as content to be analyzed, samples of programs representing three distinctive format types were collected. Our concern was not just with variability in hesitation phenomena across these formats of programming, but also with the manner in which hesitation phenomena are presented in distinct conversational styles. Thus, within program formats, conversations conducted in casual, personal, and intimate styles were investigated.

A strong suspicion that there is something unique about the profile of speech dysfluencies in the soap opera format guided the research. In response to the general question of why soap operas seem to be perceived by many American viewers as plausible approximations of life as lived, the decision was made to structure the investigation around some formal properties of conversational interaction. To what degree do these formal properties, here defined as hesitation phenomena, mirror those underlying

naturalistic interactions? Further, is there any evidence to suggest that the models of how interactions should be conducted on the basis of general purpose, i.e., style, are truer to life in televised soap operas than in prime time programs?

The results reported herein suggest an affirmative reply to both questions. The data is complex at points, but yet the general picture is quite clear.

Hesitation Phenomena and Program Format

One would expect that hesitations in speech should quite naturally occur in programs representative of the cinéma vérité type of documentary format. At least this should be the case if the documentarian has "faithfully" captured interactions as they occur. We take the documentary format as the norm, not for naturalistic interaction, but for televised renderings of naturalistic interaction. The documentarian must of course select what to film, when to film, who to film, and he/she must also edit. So we do not expect the documentary to be experience; it can only re-create portions of experience.

Does the soap opera format more closely resemble the documentary format in speech hesitations than it does the prime time format? We believe the answer is yes. The answer is clearest when false starts are considered. The soap opera segments and turns are better approximations of the documentary than are prime time segments. Repetitions, filled pauses, and unfilled pauses occur most often in the soap opera format. On the whole, of all formats, the soap opera offers the most evidence of hesitation in speech. Why it surpasses the documentary in many cases might be explained in several ways. Soap opera actors work very hard at making their characters real people (Fine, Note 1). In that quest, they may incorporate careful studies of themselves and others into preparation. Soap opera speech might also be more hesitant because actors have little time to memorize their scripts. Perhaps they forget lines, and hesitations result from that. This may be partly the case, but we do not think it constitutes a full

explanation. This point will be discussed in relation to Hypothesis 3.

Hesitation Phenomena and Conversational Style

The hypothesis related to style grew from work on naturalistic conversations. Again, the documentary should present a normative picture. But both writers and actors must be credited with some intuitive knowledge about how conversations should go depending on their general purpose.

Is there evidence in the sample that hesitations in speech increase as we move from casual to personal to intimate style? Generally there is, but several qualifications are in order.

Looking at style alone, nine of the ten measures examined revealed that it significantly affects hesitation phenomena. What is not consistent is a regular and meaningful increase as we move from style to style. There is no question that more hesitations occur in intimate style than in the other two. But some of the differences between casual and personal styles are not substantial. Although that occurrence diminishes somewhat the support for the hypothesis, it makes sense that the results would be less than perfect. What we really have is a contrast between a style that is self-involving (intimate) and others that are more self-distancing (casual and personal). Perhaps the best indicator of that occurs in relation to unfilled pauses. If such pauses tend to occur because of verbal planning, uncertainty, tentativeness, and reticence, we would expect their presence more often when conversations must involve aspects of the self.

The patterns of interaction between television format and style of conversation for half of the measures complicate the results. Three of these interactions (for retracted false starts per segment, unretracted false starts per segment, and unretracted false starts per turn) have primarily to do with the documentary's close conformity to the predictions of the hypothesis. With the documentary as stable, the other formats depart in different ways from the pattern suggested. Two interactions (for number of

repetitions per segment and number of filled pauses per segment) indicate reversals of the hypothesized change in hesitations according to style. For the documentary and the soap opera, repetitions increase as expected, but in prime time, there are fewer repetitions in segments of intimate style than there are in segments of personal style. The relation of filled pauses to the hypothesis indicates a substantial increase in the soap opera format from casual to personal style with a decrease from personal to intimate style. The documentary, on the other hand, shows only a small increase in filled pauses from casual to personal style but a dramatic increase from personal to intimate style.

Placement of Pausal Hesitations

The hypothesis that soap opera program segments contain a greater proportion of pauses placed at ungrammatical junctures than do segments from prime time programming was supported. We certainly do not have the magnitude of ungrammatical pauses found in previous research on spontaneous conversations, but that is not surprising. We do not have that magnitude in the documentary either. Soap operas, like prime time programs, are scripted, and that script will naturally intervene to some extent.

Because an average of 30% of all pauses in soap operas are at ungrammatical junctures, it seems unreasonable to attribute all pauses to the influence of script, i.e., text. The forgetting of lines, to the extent that it occurs, is probably helpful in making the speech more true to life. The actor who forgets can become the character naturally rather than in a scripted sense. Whatever the causes, the ungrammaticalness of a substantial number of pauses must affect in some way the degree to which the speech appears realistic.

Implications

We cannot say whether what we see on television reinforces and reflects society or influences changes in society, but, most likely, television does both. The media

content examined shows members of both real and fictitious "American families" interacting with one another. The program formats re-create the family in different images.

We suggest that an ethnography of television communication can illuminate the precise nature of the models presented to the viewer. Such an ethnography must be addressed to the how of communication as well as the what of communication, because to the degree that viewers perceive elements of programming as realistic, the how and the what may co-relate substantially.

The research incorporates psycholinguistic research on hesitation phenomena into a sociolinguistic perspective in order to compare and contrast language in use on television. No claims can be made regarding the impact of the hesitation distributions according to program formats and styles, but there is now some basis and reason for investigating the manner in which hesitations in speech relate to the perception that televised interaction among people is realistic or unrealistic. To the extent that television is used by viewers as a model of how they should proceed in their interactions with one another, viewers may very well learn different things depending on the format of programming they attend to. They may also receive instruction on how their interactions should be accomplished depending on the general purposes of their specific interactions.

The type of investigation reported, in conjunction with other investigations that attempt to describe contextual features and other formal properties of speech as it is used in conversation, should lead to a fuller understanding of the potential role of the medium of television in reflecting, reinforcing, and shaping our norms for interaction.

Reference Notes

1. Fine, M. G. Personal communication based on her interviews with soap opera actors, March 28, 1978.

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Table 1

Means for Hesitation Phenomena by Television Formats

Means for Program Segments

Hesitation Type	Documentary	Prime Time	Soap Opera
False Starts: Retracted	.891	.107	.679
False Starts: Unretracted	.642	.131	.413
Repetitions	1.073	.664	2.349
Filled Pauses	.883	.730	2.514
Unfilled Pauses	4.372	5.066	12.128

Means for Conversational Turns

Hesitation Type	Documentary	Prime Time	Soap Opera
False Starts: Retracted	.068	.010	.031
False Starts: Unretracted	.040	.013	.021
Repetitions	.101	.088	.106
Filled Pauses	.071	.082	.136
Unfilled Pauses	.561	.710	.770

Table 2

Means for Hesitation Phenomena by

Television Format and Style of Conversation:

Television Format

Hesitation Type	Documentary	Prime Time	Soap Opera
False Starts: Retracted/Segment*	.60	.03	.55
False Starts: Retracted/Turn*	.06	.01	.03
False Starts: Unretracted/Segment*	.47	.09	.36
False Starts: Unretracted/Turn*	.04	.01	.02
Repetitions/Segment*	.78	.32	1.77
Repetitions/Turn	.09	.06	.11
Filled Pauses/Segment*	.64	.38	1.77
Filled Pauses/Turn*	.06	.07	.14
Unfilled Pauses/Segment*	3.38	3.28	8.45
Unfilled Pauses/Turn	.52	.79	.84

*television format accounts for a significant main effect in the 2 x 2 analysis of variance (television format by style of conversation)

Table 3

Means for Hesitation Phenomena by

Television Format and Style of Conversation:

Style of Conversation

Hesitation Type	Casual	Personal	Intimate
False Starts: Retracted/Segment*	.19	.29	.68
False Starts: Retracted/Turn*	.03	.02	.05
False Starts: Unretracted/Segment*	.16	.30	.52
False Starts: Unretracted/Turn*	.01	.02	.04
Repetitions/Segment*	.34	.78	1.73
Repetitions/Turn*	.06	.07	.14
Filled Pauses/Segment*	.50	.87	1.21
Filled Pauses/Turn	.07	.09	.09
Unfilled Pauses/Segment*	2.31	3.74	9.53
Unfilled Pauses/Turn*	.46	.52	1.42

*style of conversation accounts for a significant main effect in the 2 x 2 analysis of variance (television format by style of conversation)

Table 4

Means for Hesitation Phenomena Interactions Between

Television Format and Style of Conversation

I. Mean Number of Retracted False Starts per Conversational Segment

	Format		
Style	Documentary	Prime Time	Soap Opera
Casual	.33	.02	.12
Personal	.77	.02	.77
Intimate	2.08	.06	.82

II. Mean Number of Unretracted False Starts per Conversational Segment

	Format		
Style	Documentary	Prime Time	Soap Opera
Casual	.25	.03	.16
Personal	.85	.11	.38
Intimate	1.46	.17	.54

III. Mean Number of Unretracted False Starts per Conversational Turn

	Format		
Style	Documentary	Prime Time	Soap Opera
Casual	.02	.01	.01
Personal	.07	.01	.02
Intimate	.09	.02	.04

Table 4 (continued)

IV. Mean Number of Repetitions per Conversational Segment

Style	Format		
	Documentary	Prime Time	Soap Opera
Casual	.48	.08	.52
Personal	1.00	.52	1.46
Intimate	2.46	.44	3.04

V. Mean Number of Filled Pauses per Conversational Segment

Style	Format		
	Documentary	Prime Time	Soap Opera
Casual	.43	.33	1.16
Intimate	.62	.46	2.62
Personal	2.00	.36	1.93